

Notice of Allowability

Application No.

10/789,457

Examiner

VIJAY SHANKAR

Applicant(s)

NALLY ET AL.

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Examiner Amendment on August 31, 2006.
2. ☒ The allowed claim(s) is/are 19,21-42, Renumbered 1-23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

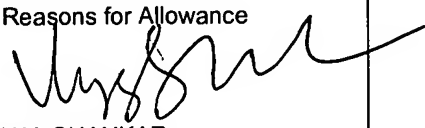
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


VIJAY SHANKAR
Primary Examiner
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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Terryence Chapman on August 31, 2006.

The application has been amended as follows:

- 1) Cancel Claim 20.
- 2) Claim 21, line 2; delete " 20 " and replace it with "19".
- 3) Claim 22, line 2; delete " 20 " and replace it with "19".
- 4) Claim 24, line 2; delete " 20 " and replace it with "19".
- 5) Claim 27, line 2; delete " 20 " and replace it with "19".

Claim 19. (Currently Amended) A TFT display controller comprising: a frame buffer operational to store TFT display data supplied from outside;

a timing controller;

a pixel pipe line (PPL) operational in response to signals generated by the timing controller to fetch and convert the TFT display data to a desired TFT display format;

and

TFT display source/gate driver controls operational in response to signals generated by the timing controller to control representation of the TFT display data,

wherein all of the frame buffer, timing controller, pixel pipe line and TFT display source/gate driver controls are incorporated onto a single die, and

wherein the PPL outputs fixed data independent from the TFT display data to the source/gate driver controls in response to signals generated by the timing controller; wherein the timing controller switches the output of the TFT display data of the converted format from the PPL and the output of the fixed data in a constant cycle and a constant ratio time.

Allowable Subject Matter

2. Claims 19 and 21-42 are allowed.

3. The following is an examiner's statement of reasons for allowance: The prior arts Greier et al (Us 2002/0149598 A1) and Wang (US 6,624,813 B1) fail to teach a TFT display controller comprising: a frame buffer operational to store TFT display data supplied from outside; a timing controller; a pixel pipe line (PPL) operational in response to signals generated by the timing controller to fetch and convert the TFT display data to a desired TFT display format; and TFT display source/gate driver controls operational in response to signals generated by the timing controller to control representation of the TFT display data, wherein all of the frame buffer, timing controller, pixel pipe line and TFT display source/gate driver controls are incorporated onto a single die, and wherein the PPL outputs fixed data independent from the TFT display data to the source/gate driver controls in response to signals generated by the timing controller; wherein the timing controller switches the output of the TFT display data of the converted format

from the PPL and the output of the fixed data in a constant cycle and a constant ratio time as claimed in Claim 19.

4. The prior arts Greier et al (Us 2002/0149598 A1) and Wang (US 6,624,813 B1) fail to teach a TFT display controller comprising: a programmable timing controller; **a programmable pixel pipe line (PPL) operational in response to signals generated by the programmable timing controller to fetch and convert the TFT display data to a desired TFT display format; a programmable color light sequencer operational in response to signals generated by the programmable timing controller to control a TFT display back light; and programmable TFT display source/gate driver controls operational in response to signals generated by the programmable timing controller to control representation of the TFT display data converted by the PPL on a desired TFT display selected from the group consisting of a field sequential color TFT display and a non-field sequential color TFT display as claimed in Claim 28.**

5. The prior arts Greier et al (Us 2002/0149598 A1) and Wang (US 6,624,813 B1) fail to teach a TFT display controller comprising: means for storing TFT display data; means for storing power management control data; **means for generating timing control signals; means for fetching and converting the TFT display data to a desired TFT display format in response to the timing control signals; means for controlling a TFT display backlight response to the timing control signals; means**

responsive to the timing control signals to control representation of the converted TFT display data on a desired TFT display selected from the group consisting of a field sequential color TFT display and a non-field sequential color TFT display; and means for determining a frequency for representation of the converted TFT display data in response to data stored in the means for storing power management control data, wherein the means for storing TFT data, means for generating timing control signals and means for fetching and converting the TFT display data to a desired TFT format are integrated onto a single die as claimed in Claim 38.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIJAY SHANKAR whose telephone number is (571) 272-7682. The examiner can normally be reached on M-F 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BIPIN SHALWALA can be reached on (571) 272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Vijay Shankar', with a stylized, cursive script.

VIJAY SHANKAR
Primary Examiner
Art Unit 2629

VS